

REMARKS

The claims currently pending in the application are claims 15-17, and 22-25. Claims 1-14 and 18-21 have been withdrawn. New claims 22-25 have been added.

Amendments have been made to claims 15 and 16. The substance of these amendments are discussed in depth below.

Claim Rejections Under 35 USC §112

Claims 15-17 have been rejected under 35 USC 112, second paragraph, as being indefinite. According to the Examiner, the relationship between steps b) and c) of claim 15 is unclear with regard to “whether or not the coloring agent is deposited in the groove.”

In explanation, Applicant points out that coloring agent is deposited on the area in which the engraving is made. This placement is the general disbursement of coloring agent at the area, as shown in Figure 2. Most of the coloring agent will lie in the groove, while some will spill over the sides into the surrounding area. This is the condition described in step c). As the coloring agent is heated and melted, it fuses into the ceramic surface within the groove as seen in Figure 4. This is the condition described in step d). Reference is further made to the specification at page 8, lines 12-20, which describes the steps. Claim 15 has been amended to more clearly describe the relationship between the steps.

It is submitted that this amendment brings Claim 15 into proper conformity and is now made definite. Accordingly, the rejection under Section 112, second paragraph, should be withdrawn. Dependent claims 16 and 17 should likewise now be proper in form and scope.

Claim Rejections Under 35 USC §103

Claims 15-17 have been rejected under 35 USC 103(a) as being unpatentable over Budnik et al (5,851,335) in view of Fields et al (5,543,335). The Examiner cites Budnik et al as teaching a method for creating a colored engraving. The Examiner acknowledges, however, that Budnik et al does not teach using a ceramic substrate for the engraving. The Examiner further cites Fields et al as teaching a method of laser engraving ceramic substrates in order to form a colored engraved mark in the substrate.

It should be pointed out that the color in any engraving performed in the Fields et al patent is merely an artifact of the heat generated in the ceramic surface from the laser engraving, and is generally black. (See column 3, lines 6-8.) Apart from a black mark, or contrasting mark, Fields et al is silent regarding any color produced in the laser engraved bricks. The Examiner's characterization that Fields et al teaches a method for creating a colored engraving on a ceramic surface therefore is not wholly correct.

In contrast, Applicant's inventive engraving process as claimed specifically provides for making a colored engraving on a ceramic surface. Specifically, claim 15, as amended, provides that the colored engraved mark in the ceramic surface approximates the hue of the coloring agent. Normally, the end color of an engraved mark in a ceramic surface can be unpredictable, and is generally dependent on the particular chemical composition of the ceramic surface material, as explained by Applicant on page 2, lines 2-5. However, that is not a concern in Fields et al, which merely seeks a "contrasting" mark. Applicant's inventive method, on the other hand, offers a means by which any desired color can be engraved into a ceramic surface, such as a brick.

Claim 15 has further been amended to provide that the coloring agent is comprised of colored glass frit. It is submitted that the use of colored glass frit to leave a colored engraved mark in a ceramic surface is non-obvious. The Examiner makes a generalized statement, without the citation to any specific reference, that colored glass frits are well-known in the molding art as an effective coloring agent. While that may be true, the Examiner provides no support for the proposition that the molding art is any way analogous to the art of laser engraving ceramic surfaces. For example, there is no explanation whether lasers are used in the molding art, or whether ceramic materials are used. Thus, Applicant has no basis by which to prepare a responsive argument.

Accordingly, because neither of the prior art references cited by the Examiner teach or suggest, either alone or in combination, a method for engraving ceramic surfaces where colored glass frit is fused into the ceramic surface leaving a colored mark approximating the colored glass frit, as provided in amended Claim 15, the obviousness rejection should be withdrawn.

Each of the remaining pending claims (16-17 and 22-25) are dependent upon Claim 15 and add further limitations thereto. Therefore, these claims are submitted to be proper in form and scope, and likewise allowable.

Conclusion

Applicant has made a sincere and earnest effort to advance the prosecution of this case to allowance. Such action is now believed to be in order. If there are any matters which can be further clarified by telephone, the Examiner is requested to contact the undersigned attorney.

If there are any fees due in connection with the filing of this response, the Office is authorized to charge same to Deposit Account No. 50-0354.

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